

elson
BUSH PEX

THE BRAND PLUMBERS TRUST



elson **BUSH** PEX
CRIMP-ON

PEX PLUMBING SYSTEM

Product information and installation manual

 TM
WaterMark
WMKA21276
Standard AS/NZS 2537.2

 TM
WaterMark
WMKA21274
Standard AS 2492

Elson Australasia Pty Ltd proudly presents the BUSHPEX range of PEX Plumbing Systems including, Pull-On, Crimp-On for water and BUSHPEX Crimp Gas.

This brochure provides specification and installation information relevant to the BUSHPEX Crimp-On PEX Plumbing system for water reticulation, 16 to 25mm.

BUSHPEX Crimp-On PEX for Water and BUSHPEX Crimp Gas PEX-AL Systems use the same BUSHPEX Crimp tools, Jaws and crimp gauges. Calibrating tools are specific to the BUSHPEX Crimp-On Water Plumbing system.

The BUSHPEX Crimp-On PEX Plumbing System comprises two main components, a flexible cross-linked high density polyethylene pipe and solid DR Brass crimp fittings with double “O” ring seals and stainless steel crimp sleeves.

BUSHPEX Crimp-On Plumbing Systems are a cost effective alternative to other plumbing systems. The BUSHPEX Crimp-On PEX system is fast and easy to install, usually with fewer fittings. The flexible pipe is light weight and resists corrosion and scale affect. Water flow noise is low in PE-Xa pipe and water hammer is significantly reduced.

BUSHPEX Pipe is a genuine PN20 PE-Xa pipe manufactured by Elson under strict quality controls at our ISO9001 accredited manufacturing facility to **Australian Standards AS 2492 with watermark certificate WMKA 21274.**

BUSHPEX pipe is suitable for use in hot and cold water services for both domestic and commercial applications. BUSHPEX Pipe options include black pipe for either hot or cold water, red for hot water, green for rainwater harvesting and lilac for recycled water.

BUSHPEX Crimp-On fittings are a solid brass double crimp fitting with double “O” ring secondary seal and stainless steel crimp sleeves. The fittings are manufactured by Elson under strict quality controls at our ISO 9001 accredited manufacturing facility to **Australian and New Zealand Standards AS/NZS 2537.2 with watermark certificate WMKA 21276.**

BUSHPEX Crimp-On specific tooling comprises of both manual and battery hydraulic options to make installation fast and easy. All tooling used must be verified before use to ensure suitability to the BUSHPEX Crimp-On systems. BUSHPEX Crimp-On calibrating tools and crimp gauges are essential requirements for the installation procedures as detailed in this manual.

All products are fully warranted for a period of **25 years** against manufacturing defects when installed in accordance with **AS/NZS 3500** and the **BUSHPEX Crimp-On PEX Plumbing System Manual** by a licenced Plumber using all BUSHPEX pipe and fittings only and approved BUSHPEX tooling.

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Features and Benefits

BUSHPEX Crimp-On PEX Plumbing System:

- Manufactured, distributed and supported by Elson.
- 25 year product warranty against product defect when installed according to detailed requirements.
- Product manufactured by Elson to relevant Australian Standards by our ISO 9001 approved manufacturing facility with all Watermark Certification by SAI Global.
- Cost effective alternative to other systems.
- Fast and easy to install.
- BUSHPEX Crimp-On tools & jaws can be used for both BSHPEX Crimp-On water and BUSHPEX Crimp Gas PEX-AL systems.
- BUSHPEX pipe properties:
 - Low water flow noise.
 - Heat and corrosion resistant.
 - Significantly reduces water hammer.
 - Smooth inner core to reduce pressure loss.
 - Coils provide fast installation, less joints, save time, save costs.
 - Available in Black for hot and cold water, Red specifically for hot water, Green for rainwater harvesting and Lilac for recycled water in sizes 16mm, 20mm and 25mm.
 - Same pipe is compatible with two BUSHPEX jointing systems - Crimp-On, Pull-On
 - Strong impact resistance.
 - Light weight and easy to install.
 - High Pressure rating 2000kPa @ 20C.
 - Low levels of thermal conductivity and expansion.
- BUSHPEX Crimp Fitting properties:
 - Double “O” ring, double indentation Crimp jointing system is the most secure Crimp jointing system on the market that is preferred internationally.
 - Long entry stainless steel crimp sleeves that don’t fall off the fitting.
 - Four easy to inspect witness holes to confirm complete insertion of pipe into fitting.
 - Blue retaining ring signifies “water” and also locates the Battery Tool Jaw.
 - German manufactured Battery Tools and Jaws developed, tested and approved for BUSHPEX.
 - DR Brass quality fittings – strictly controlled according to ISO 9001 systems.
- National support network for training, technical information and tool service.

Technical Information

BUSHPEX Crimp-On is a complete plumbing system comprising of PE-Xa pipe in sizes 16, 20 and 25mm plus a comprehensive range of DR Brass Crimp fittings with Stainless Steel sleeves. Manual and battery tooling options for calibrating and crimping the pipe and fittings completes the system, whilst the crimp gauge confirms each joint has been crimped properly.

BUSHPEX Crimp-On Pipe

BUSHPEX PE-Xa PN20 pipe is specifically designed for the BUSHPEX Crimp-On jointing system in conformance with AS 2492 with watermark certificate WMKA21274. BUSHPEX PE-Xa PN20 is compatible with all two BUSHPEX jointing systems for water including:

- BUSHPEX Pull-On
- BUSHPEX Crimp-On

BUSHPEX Pipe is available in four colours to identify the specific pipe application.

Black – Suitable for potable hot and cold water plumbing in domestic and commercial applications.

Red – Specifically for hot water lines in domestic and commercial applications.

Lilac – Specifically for recycled, non-potable water.

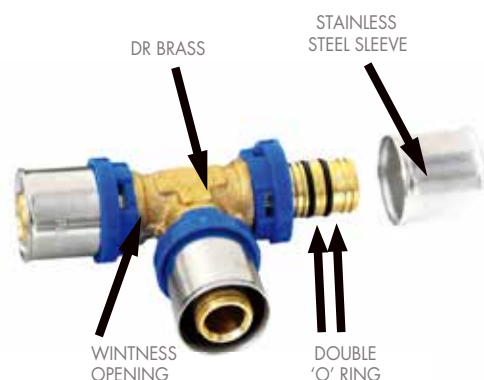
Green – Specifically for Rainwater.

NOTE: PE-Xa pipe exposed to sunlight must be protected.

BUSHPEX Crimp-On fittings

BUSHPEX Crimp-On fittings are manufactured to high standard production processes. BUSHPEX Crimp-On fittings use only D.R.BRASS (Dezincification Resistant) which is batch tested and conforms to AS2345 . Fittings have long engagement, dual “O” ring barbs with a Stainless Steel Crimp ring and blue retainer with 4 engagement witness holes. All fittings have stamped detail into their Stainless Steel Crimp Rings clearly showing Brand, Size, Pressure Rating, Standard and watermark certificate Number. Identification stamping also appears on the brass fitting where possible or it will display the letters “EL”. BUSHPEX Crimp-On fittings have been tested and approved in accordance with the Australian and New Zealand Standard AS/NZS2537.2 with watermark certificate WMKA21276.

BUSHPEX Crimp-On fittings are available in DN16, DN20 & DN25. Refer to the full product listing in this manual.



elson BUSHPEX CRIMP-ON Technical Information

Outside Diameter For SDR7.4 PEX (mm)	16.0 - 16.3	20.0 - 20.3	25.0 - 25.3
Internal Diameter For SDR7.4 PEX (mm)	10.8 - 11.9	13.6 - 14.7	17.0 - 18.3
Wall Thickness For SDR7.4 PEX (mm)	2.2 - 2.6	2.8 - 3.2	3.5 - 4.0
Nominal Pressure / Ambient Temp	2000kPa @ 20 °C	2000kPa @ 20 °C	2000kPa @ 20 °C
Standard Pipe / Fittings	AS 2492 / AS/NZS 2537.2	AS 2492 / AS/NZS 2537.2	AS 2492 / AS/NZS 2537.2
Licence Number For Pipe / Fittings	WMKA 21274 / WMKA 21276	WMKA 21274 / WMKA 21276	WMKA 21274 / WMKA 21276
Max Clip Distance Horiz / Vertical (mm)	600 / 1200	700 / 1400	750 / 1500
Min Bend Radius (mm)	160	200	250
Colours Available	Black, Red, Lilac, Green	Black, Red, Lilac, Green	Black, Red, Lilac, Green
Coil Sizes Metres (Black, Red, Lilac, Green)	25m Black / 50m All / 100m Black	25m Black / 50m All / 100m Black	25m Black & Red / 50m All
Straight Lengths Metres (Black, Red, Lilac, Green)	5m lengths available in all colours	5m lengths available in all colours	5m lengths available in all colours
Coefficient Of Linear Expansion / Thermal Expansion	1.53mm / metre / 10 °C	1.53mm / metre / 10 °C	1.53mm / metre / 10 °C
Temp / Operating Pressure	70 °C @ 1330kPa	70 °C @ 1330kPa	70 °C @ 1330kPa
Temp / Operating Pressure	60 °C @ 1500kPa	60 °C @ 1500kPa	60 °C @ 1500kPa

April 2023

Pressure Loss

Pressure loss calculations using the Hazen-Williams equation. The pressure loss was calculated for both the internal mean inside diameter of SDR 7.4 of AS 2492:2007. To generate the theoretical calculations, the following assumptions were applied:

- Friction coefficient of plastic pipe at 15.5°C was taken as 140.
- The internal diameter used for calculation was taken at the theoretical mean diameter as per the manufacturing tolerances featured in Table 3.1 of AS 2492:2007 for SDR 7.4.

The following is a list of limitations of the Hazen-Williams equations but not limited to:

- Published literature suggests that the Hazen-Williams equation is reliable for water at 15.5°C with velocity flow less than 10 feet/s or 3.048 m/s.
- Changes in water temperature, density and media will alter the pressure loss.
- Installation where pipework which is curved or bent could alter the internal diameter.
- Installation of fitting and valves within pipeline network.
- Variations in manufacturing tolerances of wall thickness and internal diameter of the PEX pipe in each SDR class.
- Variations in the actual internal surface friction coefficient.

When used to calculate the head loss with the International System of Units, the equation becomes:

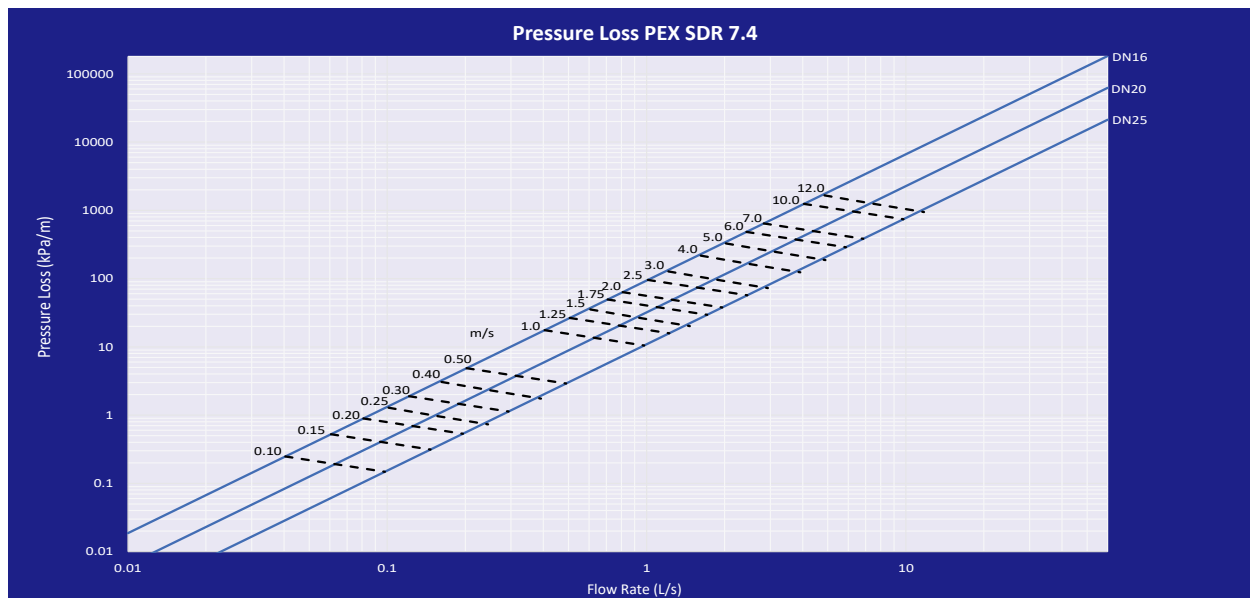
$$S = \frac{h_f}{L} = \frac{10.67 Q^{1.852}}{C^{1.852} d^{4.8704}}$$

Where:

- S = Hydraulic slope
- L = length of pipe in meters
- C = pipe roughness coefficient
- h_f = head loss in meters (water) over the length of pipe
- Q = volumetric flow rate, m³/s (cubic meters per second)
- d = inside pipe diameter, m (meters)

Note: pressure drop can be computed from head loss as $h_f \times$ the unit weight of water (e.g., 9810 N/m³ at 4 deg C)

Source: Wikipedia



Pipe & Fitting Protection and Care during Handling and Installation

BUSHPEX pipe and Crimp-on fittings must be protected from damage through all stages of the process from transport to storage and installation in accordance with AS/NZS3500. Provision for pipe and fitting protection therefore includes but is not limited to the following:

- Care must be taken to keep the pipe and fittings free of grit, dirt, dust and any foreign matter. All blue retaining rings must be securely seated onto the fitting along with the stainless steel crimp sleeve and dual “O” rings.
- Pipe must be protected from physical damage. Including cuts, abrasions, dents, kinks, tears, holes, etc.
- Pipes, either black, red, green or lilac, are not to be installed in direct sunlight.
- Pipe must be protected from long term or permanent U.V. exposure, by way of lagging, enclosing in a conduit etc.
- Pipe and fittings must be protected from excessive heat or burning, chemical / solvent attack, animal or rodent attack, machinery damage, other external threats, etc.
- Pipe must never be installed where it could be exposed to a naked flame. PE-Xa Pipe has the potential to ignite and continue to burn after the source of the flame is extinguished. In accordance with AS/NZS3500, all plastic pipe for water supply must be protected from excessive ambient heat.
- Chemical or corrosive environments.
 - Pipe must be protected.
 - Fittings must be wrapped and protected. This includes all underground installations for all fittings.
- Pipe support and clipping, both vertically and horizontally is required to ensure conformance for vibration, excessive tension, torsion or compressive stresses on fittings and pipe. Refer to Pipe Specification Chart for spacing.
- Pipe penetrations through timber and steel frames and concrete sections must conform and may require protection using grommets, fire collars, sleeving or wrapping. Holes, notches and cut-outs must be accurately drilled “in-line” to allow movement for expansion and contraction of the pipe and fittings so joints are not exposed to excessive stress. Refer to Pipe Specification Chart for timber frame cut-out limitations.
- Pipe expansion and contraction needs to be accommodated during installation to allow for movement due to thermal Linear Expansion. Failure to do so may exceed the torsional pull-out allowances on fittings resulting in leakage. Refer to the Pipe Specification Chart for the Thermal Expansion Co-efficient.
- BUSHPEX pipe is flexible but requires care when bending to avoid kinks or other permanent deformation that may restrict flow or put undue pressure on joints. If the pipe is kinked or damaged in any way it must be cut-out and replaced. BUSHPEX Crimp-On elbows are recommended for tight bends. Refer to the Pipe Specification Chart for minimum bending radius and tools for bending.

- Connecting Barb soldered connection require special attention. Prior to crimping and soldering, remove/ dismantle the blue retaining ring, stainless steel crimp ring and two “O” rings. Solder the brass connection barb and allow to cool before re-assembly. When assembling the fittings ensure the blue plastic retainer ring, the two “O” rings and stainless sleeve are installed correctly. Refer to the picture on page 7 of this brochure for assembly detail.
- In accordance with AS/NZS3500 regions with extreme hot or cold temperatures require appropriate product selection and/or insulation for protection and compliance. Consideration should also be given to insulating the pipe for energy efficiency as well as the prevention of condensation which can occur in hot and cold lines.

Underground Installation

NOTE: It is a requirement to pressure test the pipe and fittings in accordance with AS/NZS3500 prior to burying or concealing the BUSHPEX Plumbing System.

Underground installation of BUSHPEX Crimp-On pipe and fittings must be in accordance with AS/NZS3500 including but not limited to the following :

- Minimum buried depth required by standards.
- Wrapping and protection.
- Underground Piping installation recommended with no joints.
- Concrete slab piping must be continuous with no joints.
- Minimum pipe separation distance.
- Conduit sleeving through slab penetration.

BUSHPEX Crimp-On Tools

BUSHPEX Crimp-On Tools are specifically designed to be used with the BUSHPEX Crimp-On PEX Pipe and fitting System and must not be used with other systems. BUSHPEX Crimp-On Tools are manufactured to precise specifications and require care and regular maintenance to ensure accurate and consistent operation. The cleaning of tools and jaws is recommended after each use. Always keep your tools and jaws free of dirt, dust, moisture and corrosion. Lubricate jaws regularly to provide smooth operation.

It is essential for all installers to read and recognise the operational requirements of the tools along with the Jointing Procedures and safety recommendations included in this manual and the Tool Instruction Manual.

Rounding the pipe with the BUSHPEX approved Manual or battery drill calibrating tool adaptor is an installation requirement which saves time and effort with a smooth insertion over the “O” ring.

It is recommended to incorporate a checking procedure to ensure that each joint has been correctly crimped by testing every joint with a crimp gauge and marking as complete.

IMPORTANT – Please consult the Jointing Procedure included in this manual. This Guide procedure is a product installation requirement.

Ring Mains/Recirculating Hot Water Systems.

If not configured correctly, the entire plumbing system may have a dramatically reduced service life.

Recirculating Hot Water Systems or Ring Mains minimise the time it takes to get hot water to reach an appliance or outlet. It is also known that the continuous flow of water with exposure to high temperatures and high velocity makes this a very extreme and demanding application, whether using copper, Pex, or other piping materials.

To ensure system service life is maximised and to cater for the performance tolerances of heat sources, the following installation and water quality guidelines must be followed on any circulating hot water systems using Bushpex plumbing system in order to maintain the product warranty.

- Maximum pressure within the ring mains / recirculating hot water systems must be limited 500kPa (as per AS/NZ 3500)
- Maximum water temperature must not exceed 60°C.
- The pipe work design and recirculating pumps must be sized to limit the water velocity to the requirement of AS/NZS 3500 for non-metallic piping. Where copper pipe is part of the installation, the velocity restrictions for this material is extremely critical and must not be exceeded.
- A timer controlled recirculation pump must be used with a maximum circulation time of 12 hours per 24-hour period. All pipe work should be insulated and the recirculating pump must be thermostatically controlled, to further reduce stress on the system and minimise energy consumption.
- The system layout of pipework and fittings should be designed with long wide sweeping pipe bends with limited use of fittings.
- Water quality - Australian city potable water reticulation systems as defined in the Australian Drinking Water Guidelines.

ELECTROCUTION WARNING!

The potential threat of electrocution and death must be recognised if an earth line is disconnected by cutting metal pipes. ALWAYS check with a licenced electrician prior to proceeding.

System Testing

Pipe and joint system testing must be carried out in accordance with AS/NZS3500 and any other applicable local authority requirements prior to burying or concealing the BUSHPEX Crimp-On Plumbing System.

It is the responsibility of the Licenced Installer to ensure that all joints and fittings are inspected, tested and checked for leaks to ensure safety and compliance.

It is recommended to incorporate a checking procedure to ensure that each joint has been correctly crimped by testing every joint with a crimp gauge and marking as complete.

Warranty

The BUSHPEX Crimp-On Plumbing System carries a 25 year product warranty which covers product manufacturing faults and defects. This warranty only applies under the following requirements:

- The system must have been installed by a licenced Plumber.
- Proof of installation by a licenced Plumber is required.
- Proof of purchase is required.
- Installation must be in accordance with AS/NZS3500.
- Installation must be in accordance with any other relevant and applicable local authority codes which may take precedence.
- Installation must be in accordance with established installation practices.
- Installation must be in accordance with the jointing procedures included in this manual.
- Installation must only ever involve the use of the same approved BUSHPEX Pipe (watermark certificate WMKA21274), BUSHPEX Crimp-On fittings (watermark certificate WMKA21276) and BUSHPEX approved tooling.

Elson Australasia Pty Ltd undertakes to repair or replace product which is found to be faulty or defective in workmanship or manufacture according to the warranty conditions. The benefits provided to the consumer by this warranty are in addition to other rights and remedies available to the consumer under the law.

To make a warranty claim please contact Elson Australasia Pty Ltd with your contact details, proof of purchase and Licenced Installers documentation details. If the product has not been installed please contact the place of purchase and return. If there is a problem returning the product please contact Elson Australasia Pty Ltd. To make a claim under warranty you must abide by the warranty conditions.

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Our products come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

To the extent of the Law, Elson shall not be liable for any consequential loss or damage of any kind caused by any product faulty or defective in workmanship or manufacture.



BUSHPEX

CRIMP-ON

PEX PLUMBING SYSTEM



Can BUSHPEX pipe be installed under a slab?

YES – with the following requirements

- Installation in accordance with AS/NZS3500.
- Installed within BUSHPEX corrugated sleeve conduit.
- Must be sleeved when penetrating through a slab.
- Installed in a single continuous length without fittings.

Can BUSHPEX pipe be used for underground cold water service applications?

YES – when installed in accordance with AS/NZS3500 requirements.

Can BUSHPEX pipe and fittings be used to connect solar panels to the storage tank?

NO – Australian Standards do NOT allow PE-X Pipe to be used on the flow or return lines between solar panels and solar storage vessels.

Can braze-on adaptors be installed after crimping BUSHPEX Pipe?

NO – Brazing must only ever be done prior to the crimping of the BUSHPEX pipe to the fittings with “O” rings, blue plastic retaining ring and Stainless Steel Sleeve removed. Other option? Use BUSHPEX PRESS fittings from copper to BUSHPEX Crimp-On.

Is there anything I need to do before using a Manual Crimp Tool?

YES - follow all of these important steps below:

- Ensure that the tool is compatible with BUSHPEX PEX pipe and BUSHPEX Crimp-On Fittings.
- Ensure the tool is good working order.
- Ensure that the jaws align and have no gap when closed.
- Ensure that the jaws are clean, free of defects and debris.
- Refer to Jointing Procedure in this manual for correct method.

If the jaws of the Manual Crimp Tool do not align when closed what must I do?

- Adjust the jaws and test until the jaws align and have no gap. Follow the process described in the section, “jointing procedures - Tool adjustment”.

Is there anything I need to do before using the approved battery Crimp Tool?

YES – follow all of these important steps below:

- Ensure that the tool is compatible with BUSHPEX Pex Pipe and BUSHPEX Crimp-On fittings.
- Read and recognise the instructions contained in the manual.
- Ensure the correct jaws match the tool, the pipe and the fittings.
- Inspect the tool to ensure it functions properly.
- Inspect the jaws to ensure they're clean, dry, free of dirt.

If the battery Crimp-On Tool does not fully compress what must I do?

- Release the trigger and jaws by actuating the retract slide.
- Recharge the battery or replace with charged battery.
- Crimp the joint a second time and check with the crimp gauge.

Do I need to inspect the pipe end prior to crimping?

YES, always inspect the pipe and ensure it is cut square, has been "rounded & deburred", has no rough edges and the internal and external pipe is undamaged prior to crimping.

Do I need to "calibrate" the pipe prior to every crimp joint?

YES – this is a requirement for every joint - ensure that the reaming / calibrating tool suits BUSHPEX Crimp-On Pex Pipe.

Do I need to inspect the crimp fitting prior to every crimp joint?

YES – you should visually inspect each fitting to ensure it is free of any dirt and grit, has both "O" rings intact, the stainless crimp sleeve is properly located and all parts are undamaged - clean / replace / discard as required.

How can I tell if the pipe has been pushed into the fitting properly?

- Inspect the fitting to ensure the pipe is visible through all 4 witness openings.

Do I need to check every crimp joint has been compressed properly?

YES – you should check every crimp joint has been compressed properly by testing with the crimp gauge.

elson BUSHPEX CRIMP-ON Joining Instruction

Tool inspection Manual Tools:

Inspect the tool and jaw to ensure it is in good working order, operates properly and approved for use with BUSHPEX Crimp-on fittings and pipe. Visually inspect and ensure the jaws align and have no gap when the crimp tool is fully compressed and closed. The jaws must be clean and undamaged – free of defects, debris and corrosion. Always keep clean and dry and lubricate after use. If a gap is visible between the jaws then the tool must be adjusted, (see Tool Adjustment section and follow the instruction).

WARNING: An incompatible tool, incorrectly adjusted tool or damaged jaws may result in a joint failure, tool damage or both. It will also void the warranty!



Manual Tool Adjustment: The tool will require adjustment if the jaws do not fully close when compressed OR if the crimp gauge does not pass easily over both indentations in the stainless steel sleeve after the crimping process. If this occurs, follow the procedure below and re-test the tool to ensure adjustment is correct.

1. Loosen LH and / or RH “Back Nuts” with spanner.
2. Turn LH and / or RH “Adjustment Dials” one increment at a time.
3. Tighten LH and / or RH “Back Nuts” with spanner.
4. Confirm if the jaws now fully close? If NO – repeat process (1) to (4). If YES – go to step 5.
5. Crimp a joint then check with the crimp gauge until the crimp gauge passes easily over both indentations in the stainless steel crimped sleeve.

Battery Tools: Tested and approved tools include:

1. Novopress ACO153, Novopress ACO-203.

Above battery tools all require specific BUSHPEX Jaws to suit the BUSHPEX Crimp-On plumbing system.



- Before using the battery tool it is essential that the user reads and recognises the instructions contained in the manual included with every tool. Make sure you are aware of the operating features and functions.
- Ensure that only BUSHPEX compatible jaws are used to match the tool. Check the jaw matches the diameter of the BUSHPEX pipe and BUSHPEX Crimp-On fittings.
- Inspect and test all tools prior to use to ensure they are functioning properly.
- Visually inspect all tools and jaws to ensure they are clean, dry, free of dust, dirt, grit and corrosion.
- It is a requirement to check every crimped joint with the crimp gauge by passing the crimp gauge over both indentations in the stainless steel sleeve to ensure proper crimping function.
- If the battery warning light comes on or any detection of incomplete crimping occurs you must change the battery immediately, check the joint with a crimp gauge and re-crimp as necessary.
- If the crimping tool does not fully compress or the jaws do not fully close, release the trigger, actuate the retract slide, check the tool then re-crimp the joint and check with the crimp gauge to ensure conformance.

Joining Procedure:

- Cut the pipe straight and square using BUSHPEX pipe cutters. Check for any damage to the pipe including any surface damage, cuts, scores, abrasion, kinks, splits, heat damage. Re-cut or replace and remove any physically damaged pipe.



- Round and debur the end of the pipe using either the specific sized BUSHPEX manual calibrating tool or the BUSHPEX Battery drill Calibrating tool. Match the size of the calibrating tool to the pipe. Insert the calibrating tool completely into the end of the pipe with a twisting action and rotate 2-3 full turns. Remove all swarf from outside and inside the pipe.



- Visually inspect the inside of the fitting to ensure it is free of dust, dirt and grit and confirm the 2 "O" rings are intact and undamaged.



- Insert the BUSHPEX pipe into the BUSHPEX Crimp-On fitting. Ensure that the pipe is fully inserted into the fitting by viewing the pipe through the 4 inspection holes in the blue plastic retaining ring.



- For BUSHPEX Manual Crimping Tools: Centralise the BUSHPEX Manual tool – sized to suit the pipe and fitting with jaws over the stainless steel crimp ring and butted up against the blue retaining ring. Slowly bring the lever handles together closing the jaws completely compressing the joint.

NOTE: DO NOT position the manual tool crimp jaws over the blue retaining ring.

This will damage the fitting, destroy the integrity of the fitting and void warranty. If this occurs you must cut-out the fittings and replace immediately.

- For BUSHPEX approved Battery Crimping Tool: Align the Battery tool jaw to seat over the plastic retaining ring at one end and cover the stainless crimp ring. This position locates the jaw onto the fitting. Activate the battery tool and compress the stainless crimp ring completely until the jaw is closed.

- Check each joint has been compressed correctly by using the BUSHPEX Crimp Gauge. If the BUSHPEX Crimp Gauge does not pass over the crimp indentations check tooling, inspect and adjust the tool according to instructions, then re-crimp and test.



BUSHPEX Crimp-On Calibration Tool Battery Drill Calibration Tool

Specific tooling for BUSHPEX Crimp-On water.

IMPORTANT NOTES:

- Always set the drill speed no greater than 500rpm.
- Water & Gas calibrating tools are NOT interchangeable.

Calibration Procedure BUSHPEX Crimp-On Water:

- Confirm you have all tooling to complete the job – DO NOT start without these: BUSHPEX Crimp-On Water Calibration tool – sized to suit the pipe, Battery Drill – charged, BUSHPEX Crimp Gauge, BUSHPEX pipe & fittings.

- Cut the BUSHPEX pipe to length, using BUSHPEX pipe cutter.

Calibrate the end of the BUSHPEX pipe using the specific sized calibrating tool to round and deburr the end of the pipe. Ensure the calibrating tool has been completely inserted into the BUSHPEX pipe with at least 2-3 full turns. Remove all swarf from outside and inside of pipe.

- Continue as per page 16.

IMPORTANT:

- Pressure test the complete installation in accordance with AS/NZS 3500.
- This system must be installed by a licenced Plumber in accordance with this procedure otherwise warranty will be void.
- It is requirement to incorporate a visual checking system to confirm every joint has been crimped prior to concealing joints. This should be done with a crimp gauge test on every joint.



Product listing



NO.1 STRAIGHT COUPLING

Code	Description
39000	No.1 Straight Coupling 16mm
39002	No.1 Straight Coupling 20mm
39004	No.1 Straight Coupling 25mm



NO.1R REDUCING COUPLING

Code	Description
39020	No.1 R Reducing Coupling 20 x 16mm
39022	No.1 R Reducing Coupling 25 x 16mm
39024	No.1 R Reducing Coupling 25 x 20mm



NO.2 STRAIGHT FEMALE CONNECTOR

Code	Description
39060	No.2 Straight Connector 16mm x 15mm FI
39062	No.2 Straight Connector 20mm x 15mm FI
39064	No.2 Straight Connector 20mm x 20mm FI
39070	No.2 Straight Connector 25mm x 25mm FI



NO.3 STRAIGHT MALE CONNECTOR

Code	Description
39040	No.3 Straight Connector 16mm x 15mm MI
39058	No.3 Straight Connector 16mm x 20mm MI
39042	No.3 Straight Connector 20mm x 15mm MI
39044	No.3 Straight Connector 20mm x 20mm MI
39046	No.3 Straight Connector 25mm x 20mm MI
39050	No.3 Straight Connector 25mm x 25mm MI



NO.12 ELBOW

Code	Description
39080	No.12 Elbow 16mm
39082	No.12 Elbow 20mm
39084	No.12 Elbow 25mm



NO.12R ELBOW

Code	Description
39088	No.12 Elbow 20mm x 16mm
39090	No.12 Elbow 25mm x 16mm
39092	No.12 Elbow 25mm x 20mm



NO.13 MALE ELBOW

Code	Description
39400	No.13 Elbow 16mm x 15mm MI
39402	No.13 Elbow 20mm x 15mm MI
39404	No.13 Elbow 20mm x 20mm MI
39406	No.13 Elbow 25mm x 20mm MI
39408	No.13 Elbow 25mm x 25mm MI



NO.14 FEMALE ELBOW

Code	Description
39420	No.14 Elbow 16mm x 15mm FI
39422	No.14 Elbow 20mm x 15mm FI
39424	No.14 Elbow 20mm x 20mm FI
39425	No.14 Elbow 25mm x 20mm FI
39426	No.14 Elbow 25mm x 25mm FI



NO.15 LUGGED FEMALE ELBOW

Code	Description
39120	No.15BP Elbow 16mm x 15mm FI
39122	No.15BP Elbow 20mm x 20mm FI



NO.19BP LUGGED MALE ELBOW

Code	Description
39140	NO.19BP Elbow 16mm x 15mm MI 65mm Long
39142	NO.19BP Elbow 16mm x 15mm MI 90mm Long
39146	NO.19BP Elbow 16mm x 15mm MI 150mm Long
39144	NO.19BP Elbow 16mm x 15mm MI 200mm Long
39148	NO.19BP Elbow 20mm x 15mm MI 95mm Long
39152	NO.19BP Elbow 20mm x 15mm MI 200mm Long
39158	NO.19BP Elbow 20mm x 20mm MI 200mm Long



NO.24 TEE

Code	Description
39160	No.24 Tee 16mm
39162	No.24 Tee 20mm
39164	No.24 Tee 25mm



NO.25 REDUCED CENTRE TEE

Code	Description
39180	No.25 Tee Reduced Centre 20 x 20 x 16mm (16mm Centre)
39188	No.25 Tee Reduced Centre 25 x 25 x 16mm (16mm Centre)
39182	No.25 Tee Reduced Centre 25 x 25 x 20mm (20mm Centre)



NO.26 REDUCED END TEE

Code	Description
39186	No.26 Tee Reduced End 20 x 16 x 20mm (20mm Centre)
39194	No.26 Tee Reduced End 25 x 20 x 25mm (25mm Centre)



NO.27 REDUCED CENTRE & END TEE

Code	Description
39184	No.27 Tee Reduced Centre+End 20 x 16 x 16mm (16mm Centre)
39384	No.27 Tee Reduced Centre+End 25 x 20 x 20mm (20mm Centre)



NO.61 STOPPER

Code	Description
39260	No.61 Stopper 16mm
39262	No.61 Stopper 20mm
39264	No.61 Stopper 25mm



NO.62 STRAIGHT TAP CONNECTOR

Code	Description
39360	No.62 Straight Tap Connector Flat 16mm x 15mm FI Nut
39362	No.62 Straight Tap Connector Flat 20mm x 20mm FI Nut
39364	No.62 Straight Tap Connector Cone 16mm x 15mm FI Nut
39366	No.62 Straight Tap Connector Cone 20mm x 20mm FI Nut



NO.63 BENT TAP CONNECTOR

Code	Description
39340	No.63 Bent Tap Connector 16mm x 15mm FI Nut
39342	No.63 Bent Tap Connector 20mm x 20mm FI Nut



FLARED COMPRESSION UNION

Code	Description
39220	Flared Compression Union 16mm x 15mm FL
39222	Flared Compression Union 20mm x 20mm FL



BATH/LAUNDRY ASSEMBLY

Code	Description
39280	Bath/Laundry Assembly Right Angled 200mm (Floor Entry)
39282	Bath/Laundry Assembly Right Angled 300mm (Floor Entry)
39286	Bath/Laundry Assembly Straight 300mm (Side Entry)



SHOWER ASSEMBLY

Code	Description
39300	Shower Assembly Right Angled 150mm (Floor Entry)
39302	Shower Assembly Right Angled 200mm (Floor Entry)
39304	Shower Assembly Right Angled Barbs Up 150mm (Top Entry)
39306	Shower Assembly Right Angled Barbs Up 200mm (Top Entry)
39320	Shower Assembly Straight 150mm (Side Entry)



CONNECTING BARB FEMALE

Code	Description
39440	Connecting Barb Female 16mm
39442	Connecting Barb Female 20mm
39443	Connecting Barb Female 25mm x 20mm OD
39444	Connecting Barb Female 25mm



CONNECTING BARB MALE

Code	Description
39450	Connecting Barb Male 16mm
39452	Connecting Barb Male 20mm
39454	Connecting Barb Male 25mm





HOT WATER ENTRY

Code	Description
39600	Hot Water Entry 16mm x 900mm Copper Tail
36602	Hot Water Entry 20mm x 900mm Copper Tail



ADAPTOR LF BRASS PRESS WATER x BUSHPEX CRIMP-ON WATER

Code	Description
LF39880	ADAPTOR LF DR BRASS Cu PRESS WATER 15mm x BUSHPEX CRIMP-ON WATER 16mm
LF39882	ADAPTOR LF DR BRASS Cu PRESS WATER 20mm x BUSHPEX CRIMP-ON WATER 20mm
LF39884	ADAPTOR LF DR BRASS Cu PRESS WATER 20mm x BUSHPEX CRIMP-ON WATER 25mm



elso BUSHPEX CRIMP-ON PEX BALL VALVE LF DR BRASS

Code	Description
LF73980	elso BUSHPEX CRIMP-ON PEX BALL VALVE LF DR BRASS L/H 16mm
LF73982	elso BUSHPEX CRIMP-ON PEX BALL VALVE LF DR BRASS L/H 20mm
LF73984	elso BUSHPEX CRIMP-ON PEX BALL VALVE LF DR BRASS L/H 25mm



elso LF PRESS TO BUSHPEX CRIMP-ON PEX BALL VALVE

Code	Description
LF73990	elso PRESS TO BUSHPEX CRIMP-ON PEX BALL VALVE LF DR BRASS L/H 16mm
LF73992	elso PRESS TO BUSHPEX CRIMP-ON PEX BALL VALVE LF DR BRASS L/H 20mm
LF73994	elso PRESS TO BUSHPEX CRIMP-ON PEX BALL VALVE LF DR BRASS L/H 25mm



NOVOPRESS ACO153 BLUETOOTH PRESS TOOL KIT

Code	Description
36901	Novopress ACO153 Bluetooth Press Tool Kit With 2 Batteries & 1 Charger, Less Jaw



NOVOPRESS ACO153 BLUETOOTH PRESS TOOL SKIN

Code	Description
36902	Novopress ACO153 Bluetooth Press Tool Skin



NOVOPRESS JAW

Code	Description
29934	Novopress Jaw BUSHPEX Crimp-On Water & Crimp Gas 16
29935	Novopress Jaw BUSHPEX Crimp-On Water & Crimp Gas 20
29936	Novopress Jaw BUSHPEX Crimp-On Water & Crimp Gas 25



NOVOPRESS BATTERY

Code	Description
23864	Novopress Battery 1.5AH LI-LON 12V



NOVOPRESS BATTERY CHARGER

Code	Description
23866	Novopress Battery Charger 12V 230V AUS



NOVOPRESS CASE ONLY SUIT ACO-153 TOOL

Code	Description
36909	Novopress Case Only Suit ACO-153 Tool



HAND CRIMPING TOOL

Code	Description
39911	Hand Crimping Tool MKII BUSHPEX 16mm
39913	Hand Crimping Tool MKII BUSHPEX 20mm



JAW INSERT FOR HAND CRIMPING TOOL

Code	Description
39921	BUSHPEX Jaw Insert Hand Crimping Tool MKII 16mm
39923	BUSHPEX Jaw Insert Hand Crimping Tool MKII 20mm



BUSHPEX PE-X PIPE CALIBRATING TOOL

Code	Description
39971	Calibrating Tool BUSHPEX Crimp 12-25mm



BUSHPEX CRIMP GAUGE

Code	Description
39981	Crimp Gauge MKII BUSHPEX 16-25mm



BUSHPEX CRIMP-ON CALIBRATING HEADS TO SUIT BATTERY DRILL TOOL

Code	Description
39810	DN16mm
39812	DN20mm
39814	DN25mm
39816	DN16mm, 20mm, 25mm





CUTTER PIPE PEX BUSHPEX/BUSHPEX GAS

Code	Description
23930	Cutter Pipe Pex BUSHPEX/BUSHPEX Gas 16-32



T135 DAWN KWIKCUT ORIGINAL PIPE CUTTER

Code	Description
21932	T135 DAWN KWIKCUT Original Pipe Cutter 16mm-32mm



PIPE CUTTER PEX PIPE & PEX/AL/PEX PIPE

Code	Description
21936	Pipe Cutter PEX Pipe & PEX/AL/PEX Pipe 16mm-32mm

Important: Below listed elson BUSHPEX PE-Xa Pipes and Accessories can be used with all two elson BUSHPEX Plumbing Systems - Pull-On, Crimp-On.



HOT & COLD WATER PIPE (BLACK) STRAIGHT LENGTH

Code	Description
23700	Hot & Cold Water Pipe (Black) 5m Length 16mm
23702	Hot & Cold Water Pipe (Black) 5m Length 20mm
23704	Hot & Cold Water Pipe (Black) 5m Length 25mm
23706	Hot & Cold Water Pipe (Black) 5m Length 32mm



HOT & COLD WATER PIPE (BLACK) COIL

Code	Description
23710	Hot & Cold Water Pipe (Black) 100m Coil 16mm
23712	Hot & Cold Water Pipe (Black) 100m Coil 20mm
23717	Hot & Cold Water Pipe (Black) 50m Coil 16mm
23718	Hot & Cold Water Pipe (Black) 50m Coil 20mm
23714	Hot & Cold Water Pipe (Black) 50m Coil 25mm
23715	Hot & Cold Water Pipe (Black) 50m Coil 32mm
23707	Hot & Cold Water Pipe (Black) 25m Coil 16mm
23708	Hot & Cold Water Pipe (Black) 25m Coil 20mm
23709	Hot & Cold Water Pipe (Black) 25m Coil 25mm
23716	Hot & Cold Water Pipe (Black) 25m Coil 32mm



HOT & COLD WATER PIPE (BLACK) IN CONDUIT COIL

Code	Description
23720	Hot & Cold Water Pipe (Black) in Conduit 50m Coil 16mm
23722	Hot & Cold Water Pipe (Black) in Conduit 50m Coil 20mm
23724	Hot & Cold Water Pipe (Black) in Conduit 50m Coil 25mm



CONDUIT BLACK FOR BUSHPEX PE-X PIPE

Code	Description
23727	50mm Coil for 16mm PE-X Pipe (Conduit only)
23725	50mm Coil for 20mm PE-X Pipe (Conduit only)
23726	50mm Coil for 25mm PE-X Pipe (Conduit only)



HOT WATER PIPE (RED) STRAIGHT LENGTH

Code	Description
23750	Hot Water Pipe (Red) 5m Length 16mm
23752	Hot Water Pipe (Red) 5m Length 20mm
23754	Hot Water Pipe (Red) 5m Length 25mm



HOT WATER PIPE (RED) COIL

Code	Description
23756	Hot Water Pipe (Red) 50m Coil 16mm
23758	Hot Water Pipe (Red) 50m Coil 20mm
23753	Hot Water Pipe (Red) 50m Coil 25mm
23755	Hot Water Pipe (Red) 25m Coil 16mm
23757	Hot Water Pipe (Red) 25m Coil 20mm
23759	Hot Water Pipe (Red) 25m Coil 25mm



RECYCLED WATER PIPE (LILAC) STRAIGHT LENGTH

Code	Description
23737	Recycled Water Pipe (Lilac) 5m Length 16mm
23738	Recycled Water Pipe (Lilac) 5m Length 20mm
23739	Recycled Water Pipe (Lilac) 5m Length 25mm
23736	Recycled Water Pipe (Lilac) 5m Length 32mm



RECYCLED WATER PIPE (LILAC) COIL

Code	Description
23730	Recycled Water Pipe (Lilac) 50m Coil 16mm
23732	Recycled Water Pipe (Lilac) 50m Coil 20mm
23734	Recycled Water Pipe (Lilac) 50m Coil 25mm



RAIN WATER PIPE (GREEN) STRAIGHT LENGTH

Code	Description
23747	Rain Water Pipe (Green) 5m Length 16mm
23748	Rain Water Pipe (Green) 5m Length 20mm
23749	Rain Water Pipe (Green) 5m Length 25mm



RAIN WATER PIPE (GREEN) COIL

Code	Description
23740	Rain Water Pipe (Green) 50m Coil 16mm
23742	Rain Water Pipe (Green) 50m Coil 20mm
23744	Rain Water Pipe (Green) 50m Coil 25mm



CLIP MASONRY NAIL

Code	Description
23810	Open Clip 16mm Masonry Nail
23812	Open Clip 20mm Masonry Nail
23814	Open Clip 25mm Masonry Nail



CLIP TIMBER NAIL

Code	Description
23816	Open Clip 16mm Timber Nail
23817	Open Clip 20mm Timber Nail
23818	Open Clip 25mm Timber Nail



CLIP METAL SCREW

Code	Description
23820	Open Clip 16mm Metal Screw
23822	Open Clip 20mm Metal Screw
23824	Open Clip 25mm Metal Screw



PROFILE BEND BRACKET

Code	Description
23830	Profile Bend Bracket 90 Deg x 5D 16mm
23832	Profile Bend Bracket 90 Deg x 5D 20mm
23834	Profile Bend Bracket 90 Deg x 5D 25mm



PROFILE BEND BRACKET

Code	Description
23831	Profile Bend Bracket w/ Spring 90 Deg 16mm
23833	Profile Bend Bracket w/ Spring 90 Deg 20mm
23835	Profile Bend Bracket w/ Spring 90 Deg 25mm



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